

Translation

PATENT COOPERATION TREATY

PCT/EP2003/007972



PCT

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference P801126/WO/1	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/EP2003/007972	International filing date (day/month/year) 22 July 2003 (22.07.2003)	Priority date (day/month/year) 05 August 2002 (05.08.2002)
International Patent Classification (IPC) or national classification and IPC C23C 14/18, 14/58, C22C 49/14, 47/00, C04B 41/51		
Applicant MTU AERO ENGINES GMBH		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of <u>5</u> sheets, including this cover sheet.  <input type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).  These annexes consist of a total of _____ sheets.
3. This report contains indications relating to the following items:  I <input checked="" type="checkbox"/> Basis of the report II <input type="checkbox"/> Priority III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability IV <input type="checkbox"/> Lack of unity of invention V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement VI <input type="checkbox"/> Certain documents cited VII <input type="checkbox"/> Certain defects in the international application VIII <input type="checkbox"/> Certain observations on the international application

Date of submission of the demand 28 February 2004 (28.02.2004)	Date of completion of this report 30 April 2004 (30.04.2004)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/EP2003/007972

## I. Basis of the report

### 1. With regard to the elements of the international application:\*

- ☒ the international application as originally filed
- ☒ the description:  
 pages \_\_\_\_\_ 1-6 \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☒ the claims:  
 pages \_\_\_\_\_ 1-15 \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, as amended (together with any statement under Article 19  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☒ the drawings:  
 pages \_\_\_\_\_ 1/3-3/3 \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the sequence listing part of the description:  
 pages \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_

### 2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item. These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

### 3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

### 4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/fig \_\_\_\_\_

### 5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\*

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

\*\* Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. Statement**

Novelty (N)	Claims	1-15	YES
	Claims		NO
Inventive step (IS)	Claims	1-15	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-15	YES
	Claims		NO

**2. Citations and explanations****1. Reference is made to the following documents:**

D1: EP-A-0 718 897 (HITACHI LTD; INT  
SUPERCONDUCTIVITY TECH (JP)) 26 June 1996  
(1996-06-26)

D2: PATENT ABSTRACTS OF JAPAN vol. 018, no. 167  
(E-1528), 22 March 1994 (1994-03-22) &  
JP 05 342933 A (FURUKAWA ELECTRIC CO LTD:THE),  
24 December 1993 (1993-12-24)

D3: US-A-4 733 816 (EYLON DANIEL ET AL)  
29 March 1988 (1988-03-29) (mentioned in the  
application)

**2. Novelty**

The subject matter of the claims meets the  
requirements of PCT Article 33(2).

- 2.1 D1 (claims, column 4, lines 48-58) discloses a  
process for producing a ceramic fibre (ceramic  
superconductor) with a metal coating (gold film).  
According to the process described in D1, a  
superconducting wire is produced, not a reinforcing  
fibre, as in the present claim. Further, the

polygonal external form described in D1 is obtained by the use of a single-crystal fibre of the ceramic superconductor: that is, the polygonal external form is not impressed.

2.2 D2 discloses a process for producing a superconducting wire wherein a metal wire is enclosed in a polygonal metal jacket. The polygonal shape is achieved by extrusion and rolling. The subject matter of the present claims differs from that of D2 in pertaining to the production of a reinforcing fibre with a ceramic core fibre.

2.3 D3 discloses (claims) fibre-reinforced titanium composites and the production thereof. The subject matter of the present claims differs from that of D3 in that the reinforcing fibres described have a polygonal metal outer coating.

3. Inventive step:

None of the citations (alone or in combination) suggests the subject matter of the claims. For example, in D2 whereas a superconducting wire is impressed to give a hexagonal shape, the subject matter does not pertain to a ceramic fibre and the aim is to improve conductive properties, not to improve the properties of metal matrix composites (MMCs) by use of the claimed reinforcing fibres.

4. The subject matter of the claims is industrially applicable.